What is claimed is:

1. A composite medical device, comprising:

a composite elongated member formed from an outer member comprising a first material and an inner member comprising a second material different from the first material, wherein the second material is more elastic than the first material; and

at least one flexibility region formed on said composite elongated member, said flexibility region formed by selectively removing a portion of the outer member to expose the inner member.

2. The device of claim 1, wherein the first material is selected from the group of materials consisting of stainless steel, gold, molybdenum, platinum, titanium, tungsten, Elgiloy, L605, MP35N, Ta-10W, 17-4PH, Aeromet 100, cobalt-chrome alloy, cobalt alloy, metal glass alloy, and refractory metal alloy.

3. The device of claim 1, wherein said second material comprises a shape-memory material.

4. The device of claim 1, wherein said second material comprises a superelastic material.

5. The device of claim 1, wherein said outer member further includes a polymeric coating.

6. The device of claim 1, wherein at least a portion of said outer member is electrically removed.

7. The device of claim 1, wherein at least a portion of said outer member is chemically removed.

8. The device of claim 1, wherein at least a portion of said outer member is mechanically removed.

9. The device of claim 1, wherein the composite medical device comprises an intravascular filter.

10. The device of claim 1, wherein the composite medical device comprises a stent or stent graft.

11. An intravascular filter device for placement within a body vessel, comprising:

a plurality of elongated legs each having a proximal end and a distal end, the elongated legs being secured together;

each of said plurality of elongated legs being formed of an outer member comprising a first material, and an inner member comprising a second material different from the first material.

12. The intravascular filter device of claim 11, wherein said plurality of elongated legs are rod members.

13. The intravascular filter device of claim 11, wherein said plurality of elongated legs are tubular members.

14. The intravascular filter device of claim 11, wherein said plurality of elongated legs are ribbon members.

15. The intravascular filter device of claim 11, wherein said plurality of elongated legs are configured to expand from a substantially straight position to an outswept position when placed within the body vessel.

16. The intravascular filter device of claim 11, wherein at least a portion of the distal end of said outer member is removed.

17. The intravascular filter device of claim 11, wherein said first material includes a radiopaque material.

18. The intravascular filter device of claim 11, wherein the first material is selected from the group of materials consisting of stainless steel, gold, molybdenum,

platinum, titanium, tungsten, Elgiloy, L605, MP35N, Ta-10W, 17-4PH, Aeromet 100, cobalt-chrome alloy, cobalt alloy, metal glass alloy, and refractory metal alloy.

19. The intravascular filter device of claim 11, wherein the inner member is more elastic than the outer member.

20. The intravascular filter device of claim 11, wherein said outer member further includes a polymeric coating.

21. The intravascular filter device of claim 11, wherein said second material comprises a shape-memory material.

22. The intravascular filter device of claim 11, wherein said second material comprises a superelastic material.

23. The intravascular filter device of claim 11, wherein each of said plurality of elongated legs includes a hook region configured to engage the walls of the body vessel.

24. The intravascular filter device of claim 23, wherein said hook region is formed by removing at least a portion of said outer member.

25. The intravascular filter device of claim 23, wherein said hook region comprises a main section, a reversibly bent section, and a pointed tip section.

26. The intravascular filter device of claim 11, wherein at least a portion of said outer member is removed to form one or more zigzag regions along each of said plurality of elongated legs.

27. The intravascular filter device of claim 26, wherein said one or more zigzag regions are longitudinally offset from each other.

28. The intravascular filter device of claim 11, wherein at least a portion of said outer member is electrochemically removed.

29. The intravascular filter device of claim 11, wherein at least a portion of said outer member is chemically removed.

30. The intravascular filter device of claim 11, wherein at least a portion of said outer member is mechanically removed.

31. An intravascular filter device for placement within a body vessel, comprising:

an apical head; and

a plurality of elongated legs each having a proximal end and a distal end, the distal end of each of said plurality of elongated legs being secured to the apical head;

each of said plurality of elongated legs being formed of an elastic inner member and a stiff outer member, wherein a portion of said stiff outer member is removed to form a hook region along each elongated leg.

32. The intravascular filter device of claim 31, wherein said plurality of elongated legs are rod members.

33. The intravascular filter device of claim 31, wherein said plurality of elongated legs are tubular members.

34. The intravascular filter device of claim 31, wherein said plurality of elongated legs are ribbon members.

35. The intravascular filter device of claim 31, wherein said plurality of elongated legs are configured to bend or flex from a substantially straight position to an outswept position when placed within the body vessel.

36. The intravascular filter device of claim 31, wherein at least a portion of the distal end of said stiff outer member is removed.

37. The intravascular filter device of claim 31, wherein said stiff outer member includes a radiopaque material.

38. The intravascular filter device of claim 31, wherein the stiff outer member is formed of a material selected from the group of materials consisting of stainless steel, gold, molybdenum, platinum, titanium, tungsten, Elgiloy, L605, MP35N, Ta-10W, 17-4PH, Aeromet 100, cobalt-chrome alloy, metal glass alloy, and refractory metal alloy.

39. The intravascular filter device of claim 31, wherein said stiff outer member includes a polymeric material.

40. The intravascular filter device of claim 31, wherein said elastic inner member comprises a shape-memory material.

41. The intravascular filter device of claim 31, wherein said elastic inner member comprises a superelastic material.

42. The intravascular filter device of claim 31, wherein said hook region comprises a main section, a reversibly bent section, and a pointed tip section.

43. The intravascular filter device of claim 31, wherein at least a portion of said stiff outer member is removed to form one or more zigzag regions along each of said plurality of elongated legs.

44. The intravascular filter device of claim 43, wherein said one or more zigzag regions are longitudinally offset from each other.

45. The intravascular filter device of claim 31, wherein at least a portion of said stiff outer member is electrochemically removed.

46. The intravascular filter device of claim 31, wherein at least a portion of said stiff outer member is chemically removed.

47. The intravascular filter device of claim 31, wherein at least a portion of said stiff outer member is mechanically removed.

48. An intravascular filter device for placement within a body vessel, comprising:

an apical head; and

a plurality of elongated legs each having a proximal end and a distal end, the distal end of each of said plurality of elongated legs being secured to the apical head;

each of said plurality of elongated legs being formed of an elastic inner member and a stiff outer member, wherein a portion of said stiff outer member is removed to form a hook region and one or more zigzag regions along each elongated leg.

49. An intravascular filter device for placement within a body vessel, comprising:

an apical head having a proximal portion and a distal portion;

a plurality of elongated legs each having a proximal end and a distal end, the distal end of each of said plurality of elongated legs having a reduced diameter portion secured to the proximal portion of the apical head;

each of said plurality of elongated legs being formed of an elastic inner member and a stiff outer member, wherein a portion of said stiff outer member is removed to form a hook region and one or more zigzag regions along the length of each elongated leg, the one or more zigzag regions being longitudinally offset from each other.

50. A composite stent, comprising:

a plurality of threads formed from an outer member comprising a first material, and an inner member comprising a second material different from the first material, wherein the second material is more elastic than the first material; and

at least one flexibility region formed on said composite elongated member, said flexibility region formed by selectively removing a portion of the outer member to expose the inner member.

51. The composite stent of claim 50, wherein said plurality of threads are wire members.

52. The composite stent of claim 50, wherein said plurality of threads are tubular members.

53. The composite stent of claim 50, wherein said plurality of threads are ribbon members.

54. The composite stent of claim 50, wherein the stent is configured to self-expand when deployed in a body vessel.

55. The composite stent of claim 50, wherein said composite stent includes a middle portion and two end portions.

56. The composite stent of claim 55, wherein said at least one flexibility region is located at either of said two end portions.

57. The composite stent of claim 50, wherein said first material includes a radiopaque material.

58. The composite stent of claim 50, wherein the first material is selected from the group of materials consisting of stainless steel, gold, molybdenum, platinum, titanium, tungsten, Elgiloy, L605, MP35N, Ta-10W, 17-4PH, Aeromet 100, cobalt-chrome alloy, cobalt alloy, metal glass alloy, and refractory metal alloy.

59. The composite stent of claim 50, wherein said outer member further includes a polymeric coating.

60. The composite stent of claim 50, wherein said second material comprises a shape-memory material.

61. The composite stent of claim 50, wherein said second material comprises a superelastic material.

62. The composite stent of claim 50, wherein at least a portion of said outer member is electrically removed.

63. The composite stent of claim 50, wherein at least a portion of said outer member is chemically removed.

64. The composite stent of claim 50, wherein at least a portion of said outer member is mechanically removed.